OIPE JC13 APR 16 2004 PATENT & TRADEMARK OFFICE

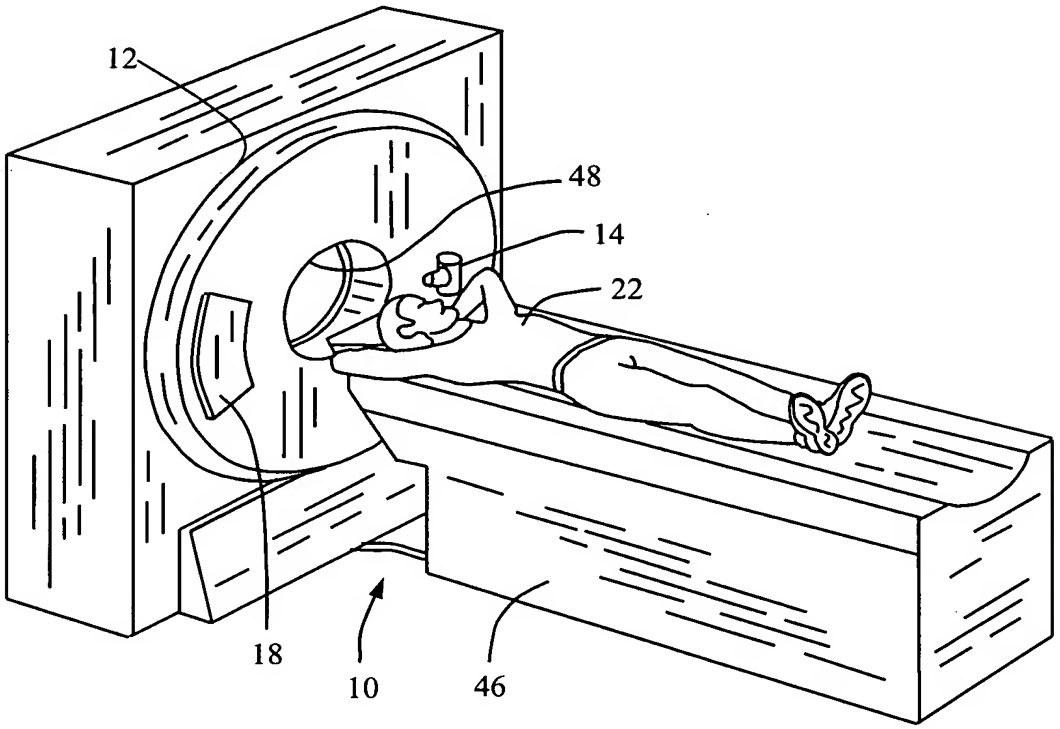

FIG. 1

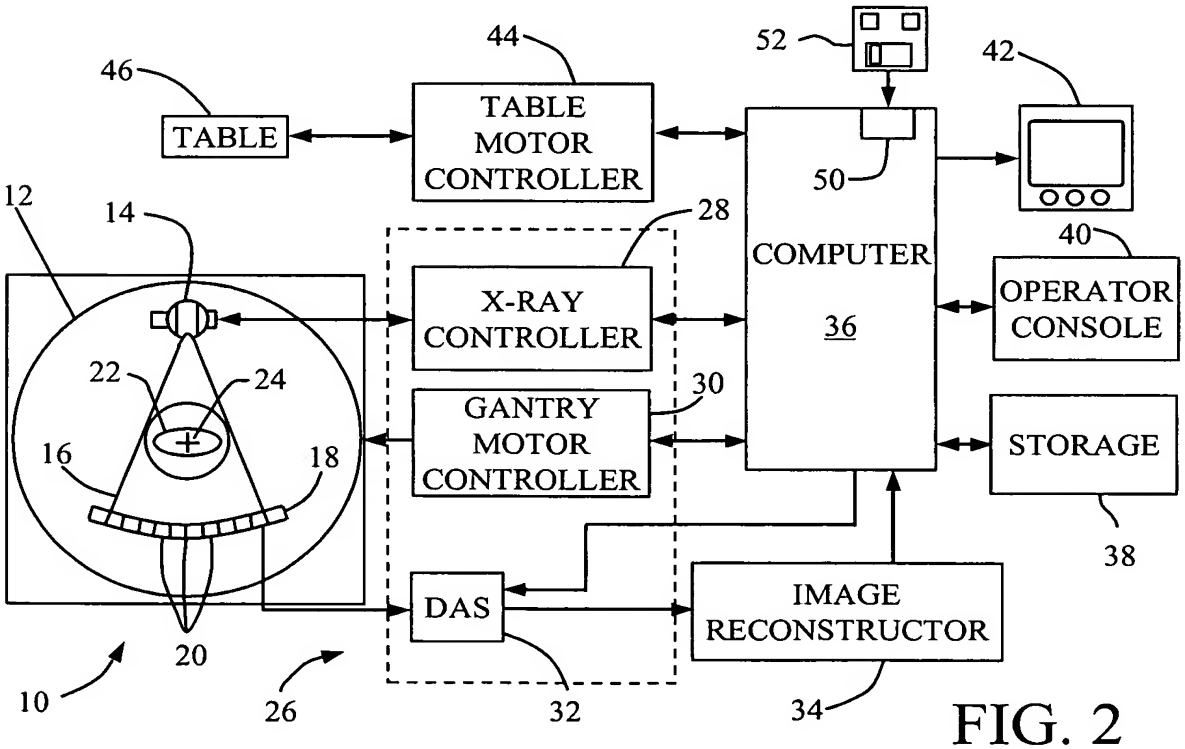

FIG. 2

OIPE JC13 APR 16 2004 PATENT & TRADEMARK OFFICE

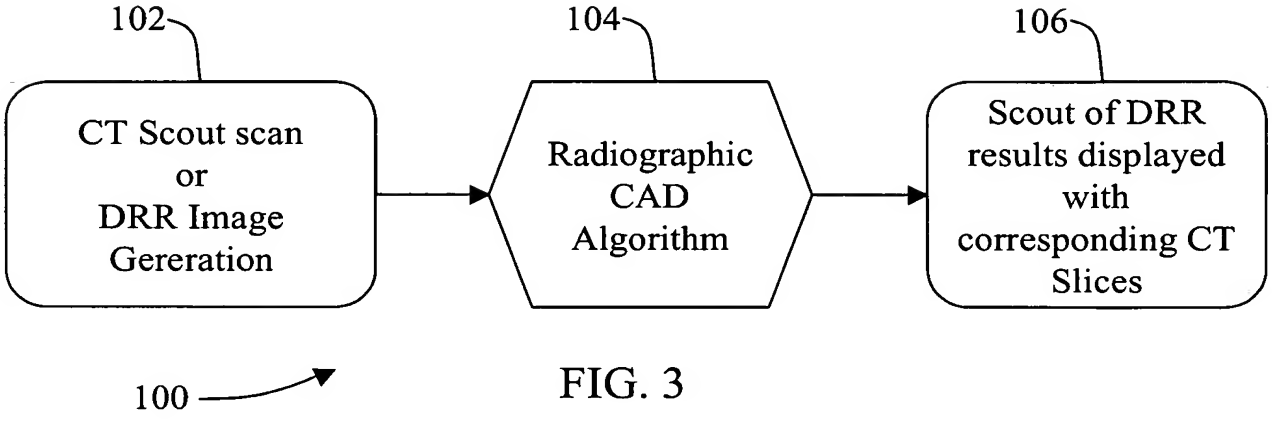

FIG. 3

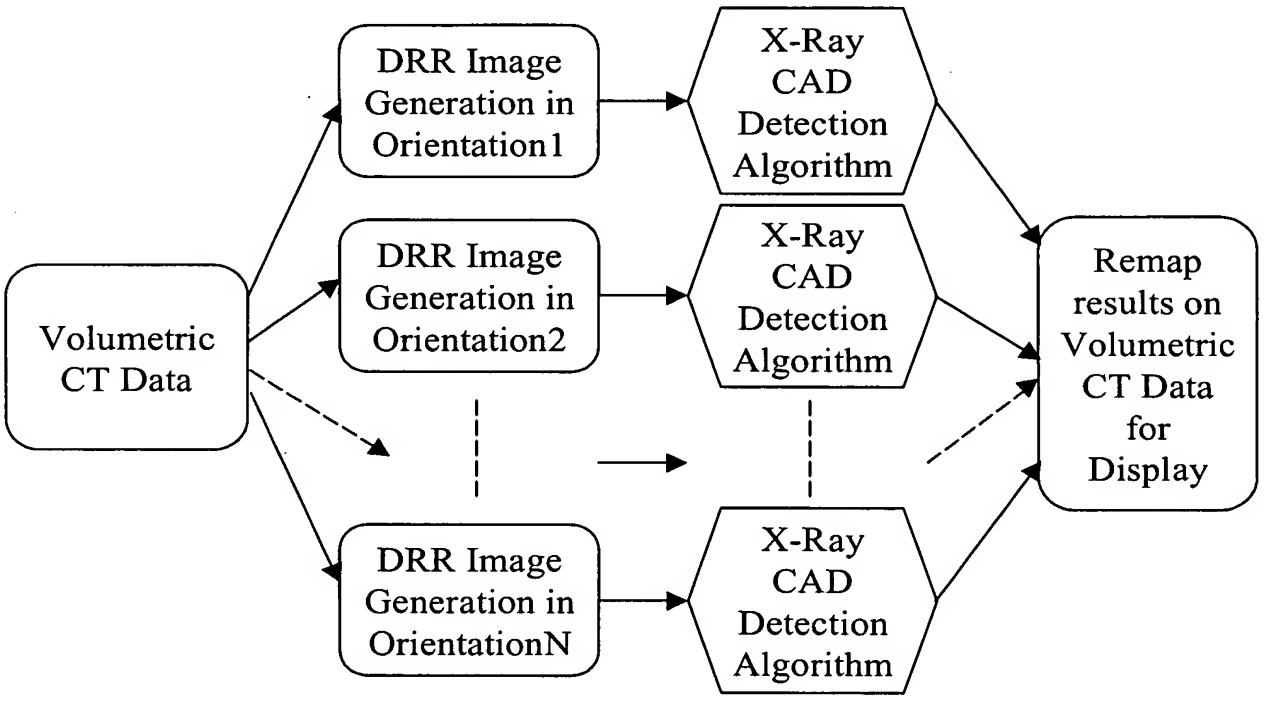

FIG. 4

OIPE JC13 APR 16 2004 PATENT & TRADEMARK OFFICE

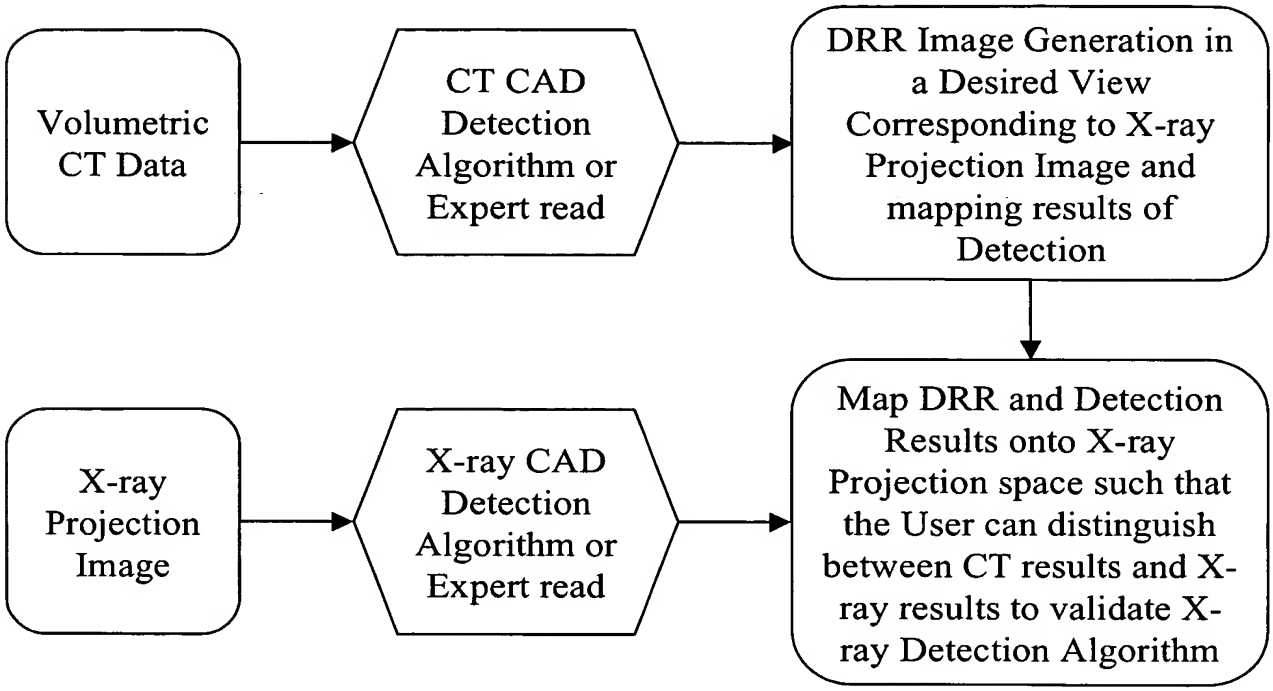

FIG. 5

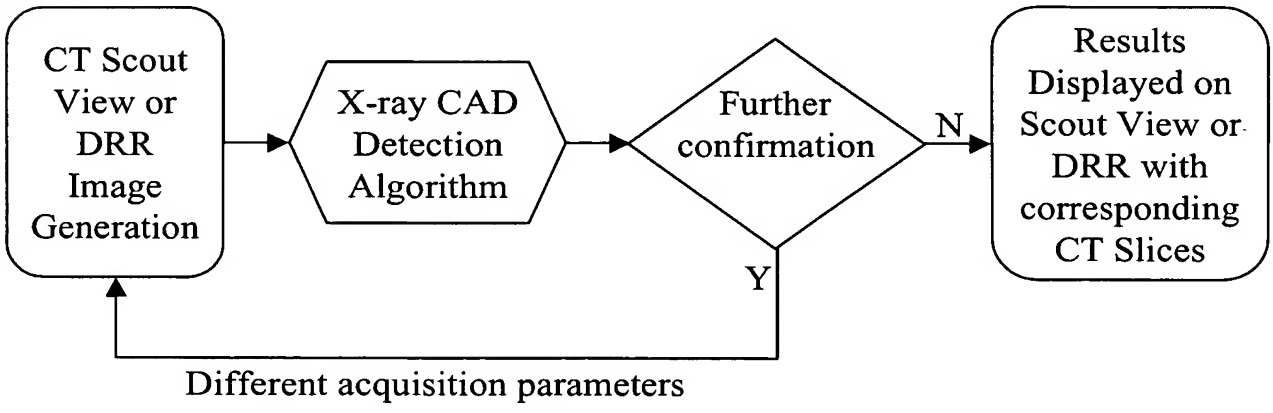

FIG. 6

OIPE JC13 APR 16 2004 PATENT & TRADEMARK OFFICE

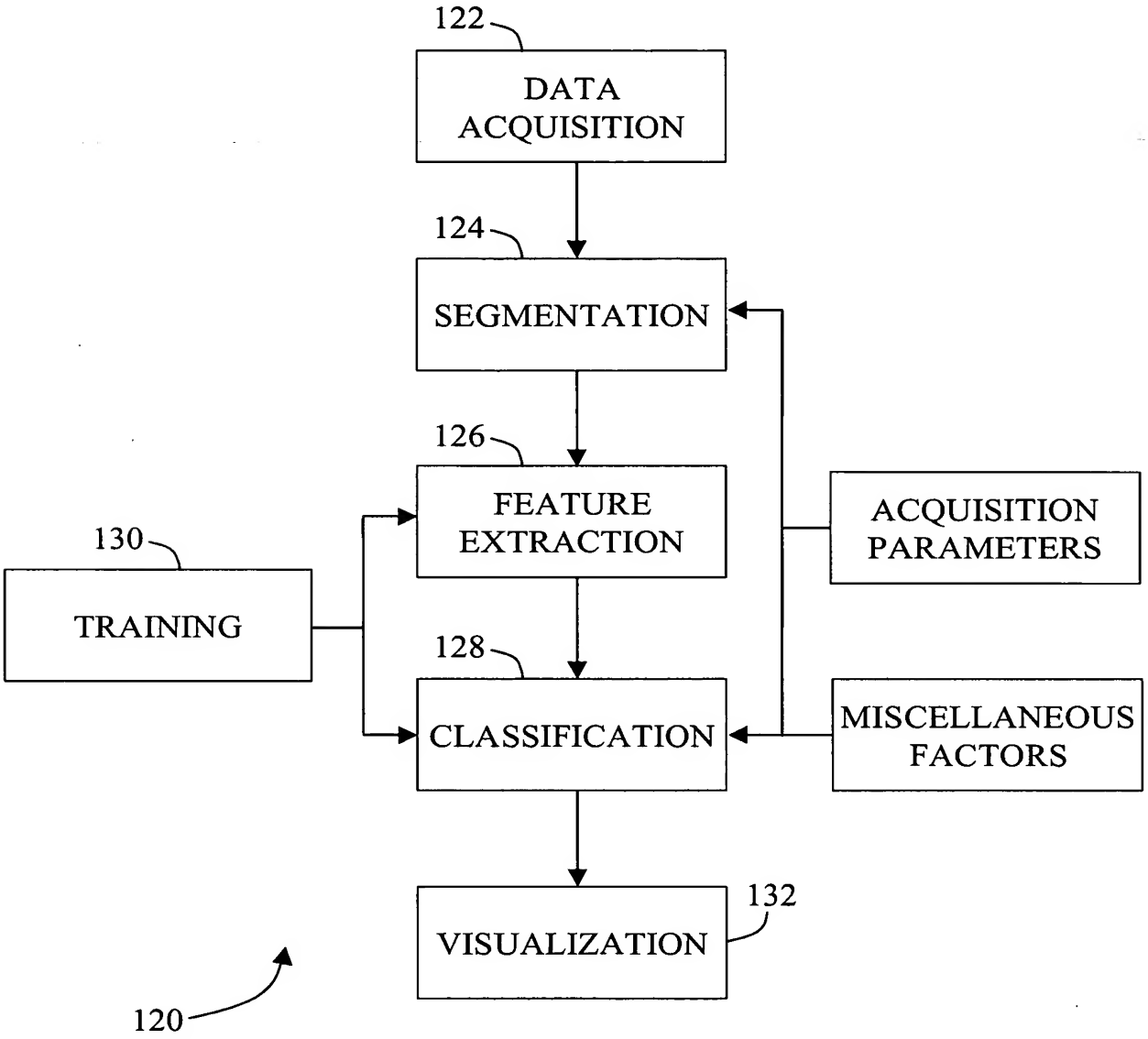

FIG. 7 Schematic of CAD process.

OIPE JC13
APR 16 2004
PATENT & TRADEMARK OFFICE

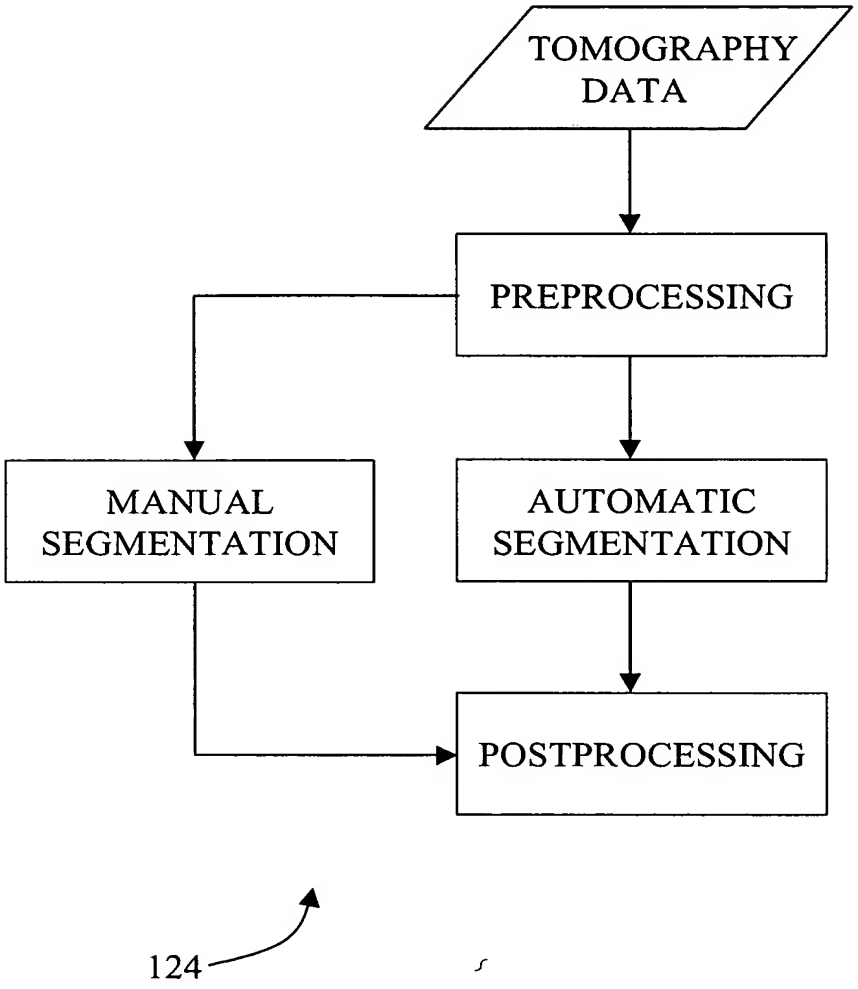

FIG. 8 Segmentation process for data.

OIPE JC13 APR 16 2004 PATENT & TRADEMARK OFFICE

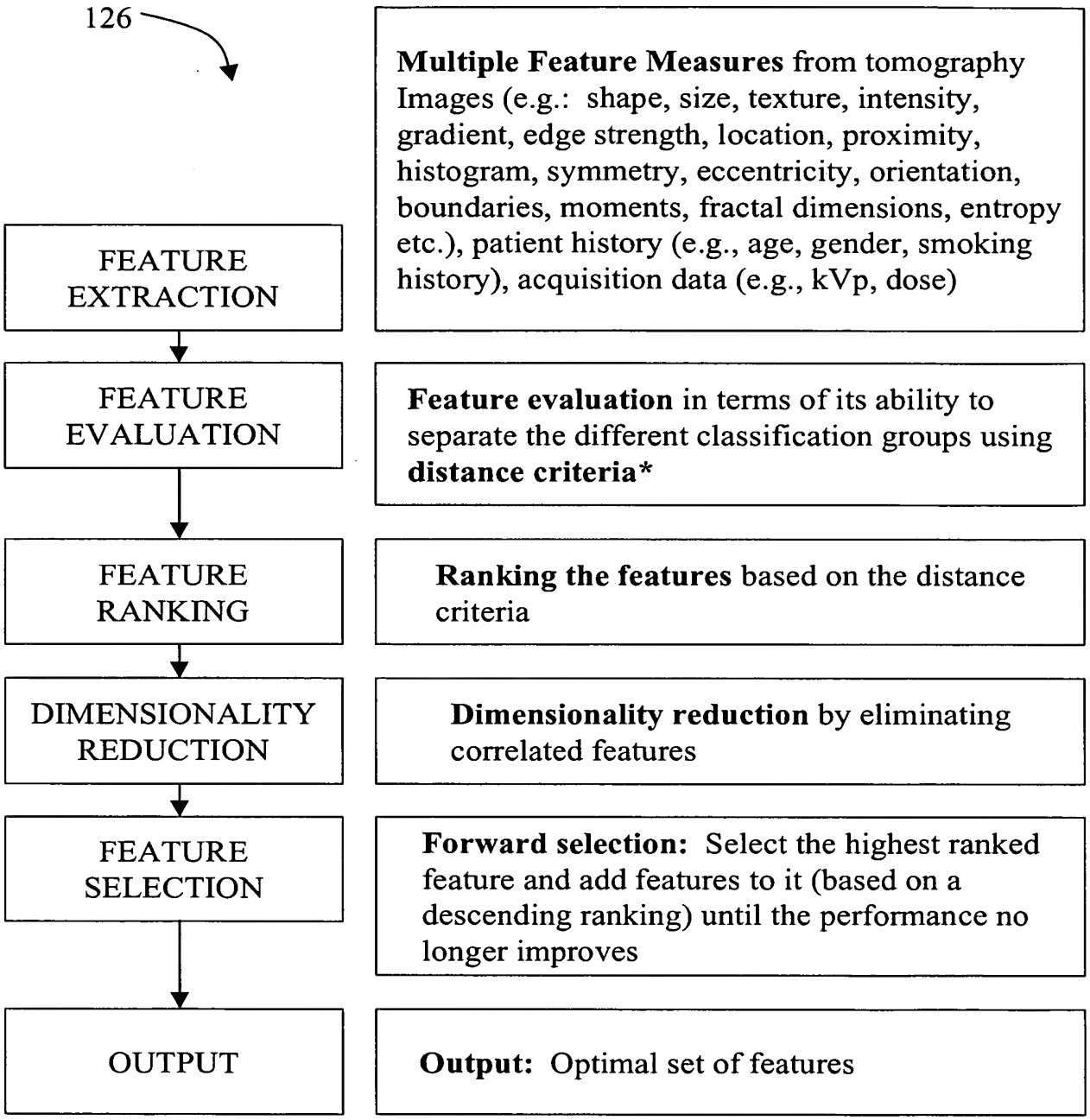

FIG. 9 Feature selection process for data.

*Several different distance criteria can be used: Divergence, Bhattacharya distance, Mahalanobis distance. These techniques are described in standard textbooks including: K. Fukanaga, Introduction to Statistical Pattern Recognition. Academic Press, 2nd ed., 1990.

APR 16 2004

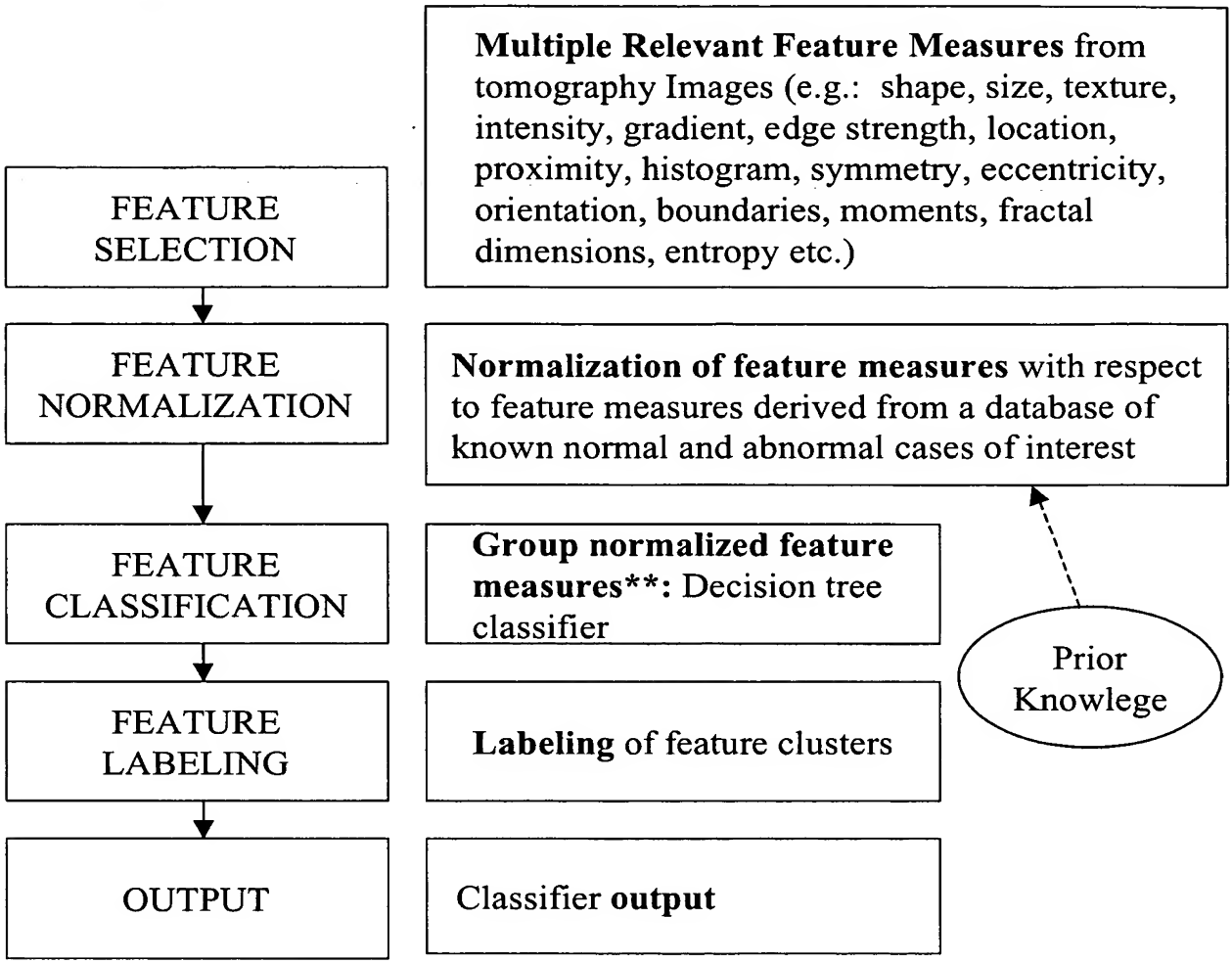

FIG. 10 Feature classification process for tomographic data.

**Several different methods can be used: Decision tree anaylsis, discriminant function analysis, Bayes' minimum-risk method, clustering techniques, similarity measure approach. These techniques are described in standard textbooks including: Fundamentals of digital image processing by Anil K. Jain, Prentice Hall (1988).